CLAIMS

1. Process for restoring a p53-dependant transactivation activity in cells exhibiting a mutated p53 protein, comprising introducing, into the said cell, a single-chain antibody which is able to bind the mutated p53 protein specifically.

2. Process according to Claim 1, comprising introducing, into the said cell, a nucleic acid which comprises a sequence encoding the said single-chain antibody under the control of a promoter which is able to function in the cell.

3. Process according to Claim 1 or 2, characterized in that the single-chain antibody is able specifically to bind an epitope which is present in the C-terminal region of p53 and which carries the oligomerization domain and the regulatory domain.

4. Process according to Claim 3, characterized in that the single-chain antibody is able specifically to bind an epitope which is present in the C-terminal region of p53 between residues 320-393.

5. Process according to Claim 3, characterized in that the single-chain antibody is selected from ScFv421, having the sequence SEQ ID No. 1, and 11D3, having the sequence SEQ ID No. 2.

6. Process according to Claim 2, characterized in that the nucleic acid is part of a vector.

7. Process according to Claim 6, characterized in that the vector is a viral vector.

8. Process according to Claim 7, characterized in that the vector is a defective recombinant adenovirus.

9. Process according to Claim 7, characterized in that the vector is a defective recombinant retrovirus.

10. Process according to Claim 7, characterized in that the vector is a defective recombinant AAV.

11. Process according to Claim 7, characterized in that the vector is a defective recombinant HSV.

12. Process according to Claim 6, characterized in that the vector is a chemical or biochemical vector.

13. Process according to Claim 1 or 2, characterized in that the mutated p53 protein is devoid of tumour-suppressing activity.

14. Process according to Claim 13, characterized in that the mutated p53 protein is a form which is present in tumour cells.

15. Process according to Claim 14, characterized in that the mutated p53 protein is selected from the proteins p53H273, p53W248 and p53G281.

16. Process according to Claim 1 or 2,

characterized in that the cell exhibiting a mutated p53 protein is a tumour cell.

17. Process according to Claim 16, characterized in that the tumour cell is a cell of a lung, colon, head and neck, hepatic or brain tumour.

18. Use of a single-chain antibody which is able to bind a p53 protein specifically for modifying the conformation of the said mutated p53 protein.

19. Use of a single-chain antibody which is able to bind a mutated p53 protein specifically for preparing a pharmaceutical composition which is intended for treating hyperproliferative disorders in which a mutated p53 protein is involved.

20. Use of a nucleic acid encoding a single-chain antibody which is able to bind a mutated p53 protein specifically for preparing a pharmaceutical composition which is intended for treating hyperproliferative disorders in which a mutated p53 protein is involved.

21. The molecule 11D3, or a variant which recognizes the same epitope or which has an improved affinity.

22. Nucleic acid encoding a molecule according to Claim 21.

23. Nucleic acid according to Claim 22, characterized in that it is a cDNA, an RNA or a synthetic or semi-synthetic acid.

24. Nucleic acid according to Claim 23,

characterized by the sequence SEQ ID No. 2.

25. Composition comprising a nucleic acid according to Claim 22.

26. Composition comprising a molecule according to Claim 21.

27. Pharmaceutical composition comprising a nucleic acid according to Claim 22 and a pharmaceutically acceptable excipient, for treating hyperproliferative disorders.

add A2

add B1